

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
5 August 2004 (05.08.2004)

PCT

(10) International Publication Number
WO 2004/066198 A3

(51) International Patent Classification⁷: G06T 5/00, 7/00

(21) International Application Number:
PCT/IB2004/000138

(22) International Filing Date: 16 January 2004 (16.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03290162.1 22 January 2003 (22.01.2003) EP

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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

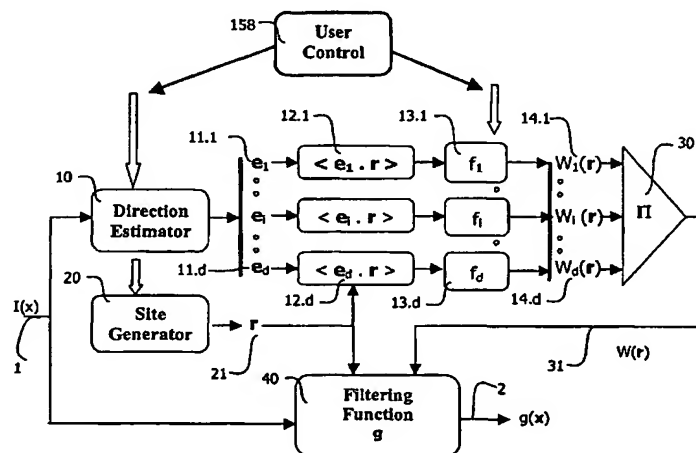
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,
EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,

[Continued on next page]

(54) Title: GENERATING FILTERS FOR FILTERING IMAGE FEATURES ACCORDING TO THEIR ORIENTATION



(57) Abstract: Image processing system for generating a multidimensional adaptive oriented filter to process image data in a number d of dimensions, comprising product means for producing weighted scalar coefficients $[W_1(r), \dots, W_i(r), \dots, W_d(r)]$ of a number d of vectors of an oriented basis of vectors by a number n of local vectors related to each point; combining means (II) for producing a set of one-scalar weight coefficients $[W(r)]$ from the combination of the weighted scalar products; and filtering means (g) for producing filtered image data $[g(x)]$ from the combination of the image data $[I(x)]$ with the one-scalar weight coefficients $[W(r)]$. The system further comprises a direction estimator (10) for providing, at each image point, an oriented orthogonal basis of a number d of vectors $(e_1, \dots, e_i, \dots, e_d)$; a site generator (20) for providing n site vectors of a local vector support; and product means for computing d scalar products of vectors of the orthogonal basis by each of the n site vectors. This system may also comprise means for providing weighting means for the scalar products through scalar functions. The filtering means may comprise a weighted normalized sum of the image data by the one-scalar weight coefficients $[W(r)]$.

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MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

(88) Date of publication of the international search report:
2 June 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/000138

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06T5/00 G06T7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>YANG G Z ET AL: "STRUCTURE ADAPTIVE ANISOTROPIC IMAGE FILTERING" IMAGE AND VISION COMPUTING, GUILDFORD, GB, vol. 14, no. 2, March 1996 (1996-03), pages 135-145, XP001058181 ISSN: 0262-8856</p> <p>section 2. "Basic principle of the algorithm"</p> <p>section 3. "Local orientation detection"</p> <p>section 7. "Application results and discussion"</p> <p style="text-align: center;">----- -/-</p>	1-9, 11-13



Further documents are listed in the continuation of box C.



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Date of the actual completion of the international search

12 January 2005

Date of mailing of the international search report

19/01/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ORKISZ M M ET AL: "IMPROVED VESSEL VISUALIZATION IN MR ANGIOGRAPHY BY NONLINEAR ANISOTROPIC FILTERING" MAGNETIC RESONANCE IN MEDICINE, ACADEMIC PRESS, DULUTH, MN, US, vol. 37, no. 6, 1 June 1997 (1997-06-01), pages 914-919, XP000655655 ISSN: 0740-3194 abstract section "theory"	1-13
A	US 5 771 318 A (FANG MING ET AL) 23 June 1998 (1998-06-23) column 4, line 34 - column 5, line 35	1-13

INTERNATIONAL SEARCH REPORT

Patent

International Application No

PCT/IB2004/000138

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5771318	A	23-06-1998	NONE